**CLAIM AMENDMENTS**

Claims 1-90 (Canceled).

91. (Currently amended) An *in vitro* process for producing more than one copy of a specific nucleic acid under isostatic conditions of temperature, buffer and ionic strength, said products being substantially free of any primer sequences, said process comprising the steps of:

(a) providing a nucleic acid sample containing or suspected of containing the sequence of said specific nucleic acid;

(b) contacting said sample with a mixture comprising:

(i) unmodified nucleic acid precursors,

(ii) one or more specific chemically-modified primers each of which primer is substantially complementary to a distinct sequence of said specific nucleic acid, and

(iii) an effective amount of a nucleic acid producing catalyst;

(c) allowing said mixture to react under isostatic conditions of temperature, buffer and ionic strength thereby (i) producing at least one complementary copy of said specific nucleic acid; and

(d) removing the primer portion from said complementary copy produced in step (c) to regenerate a primer binding site on said specific nucleic acid thereby rendering said primer binding site available for a new priming event to take place at said regenerated primer binding site to produce more than one copy of said specific nucleic acid;

under isostatic conditions of temperature, buffer and ionic strength.

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92. (Previously Presented) The process of claim 91, wherein said removing step (d) is carried out by digestion with an enzyme.

93. (Previously Presented) The process of claim 92, wherein said enzyme comprises ribonuclease H.

94. (Previously Presented) The process of claim 91, wherein said specific chemically

modified primers comprise ribonucleic acid, deoxyribonucleic acid, a DNA-RNA copolymer, a polymer capable of hybridizing or forming a base-specific pairing complex and initiating nucleic acid polymerization, or a combination of any of the foregoing.

95. (Previously Presented) The process of claim 91, wherein said specific chemically modified primers comprise a 3'-hydroxyl group or an isosteric configuration of heteroatoms.

96. (Previously Presented) The process of claim 95, wherein said heteroatoms comprise nitrogen or sulfur.

97. (Previously Presented) The process of claim 91, wherein said specific chemically modified primers comprise nucleoside triphosphatase, nucleoside triphosphate analogs, or a combination thereof, wherein at least one of said nucleoside triphosphates or analogs are modified on the sugar, phosphate or base.

98. (Previously Presented) The process of claim 91, wherein said specific chemically modified primers further comprise from about 1 to about 200 non-complementary nucleotide or nucleotide analogs.

99. (currently amended) An *in vitro* process for producing more than one copy of a specific nucleic acid under isostatic conditions of temperature, buffer and ionic strength, said products being free of any primer sequences, said process comprising the steps of:

(a) providing a nucleic acid sample containing or suspected of containing the sequence of said specific nucleic acid;

(b) contacting said sample with a mixture comprising:

(i) unmodified nucleic acid precursors,

(ii) one or more specific unmodified primers each of which primer comprises at least one non-complementary sequence to a distinct sequence of said specific nucleic acid, such that upon hybridization to said specific nucleic acid at least one

loop structure is formed from a segment of said primer or primers, and

(iii) an effective amount of a nucleic acid producing catalyst;

(c) allowing said mixture to react , thereby producing at least one complementary copy of said specific nucleic acid comprising at least one loop structure or structures by extension of said primers of (b)(ii); and

(d) removing the loop structure or structures from the complementary copy produced in step (c) to regenerate a primer binding site on said specific nucleic acid, to, wherein said removal allows a previously presented primer binding site available for another priming event to, occur with said one or more specific unmodified primers each of which primer comprises at least one non-complementary sequence to a distinct sequence of said specific nucleic acid thereby producing more than one copy of said specific nucleic acid, under isostatic conditions of temperature, buffer and ionic strength by means of steps (a)-(d).

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100. (Previously Presented) The process of claim 99, wherein said loop structure is removed in step(d) by digestion with an enzyme.

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101. (Previously Presented) The process of claim 100, wherein said enzyme comprises ribonuclease H.

102. (Previously Presented) The process of claim 99, wherein said specific unmodified primers comprise ribonucleic acid, deoxyribonucleic acid, a DNA-RNA copolymer, a polymer capable of hybridizing or forming a base-specific pairing complex and initiating nucleic acid polymerization, or a combination of any of the foregoing.

103. (Previously Presented) The process of claim 99, wherein said specific unmodified primers further comprise from about 1 to about 200 non-complementary nucleotide or nucleotide analogs.